20011001.ba v03_n229.bam.20011001

>From ???@??? Mon Oct 1 22:23:24 2001 -0500
Message-Id: <200110020322.f923MsTC004669@sco.theporch.com>
Date: Mon, 1 Oct 2001 22:22:25 CDT
From: Old Tube Radios <boatanchors@theporch.com>
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BOATANCHORS digest 3229

BOATANCHORS Digest 3229

Topics covered in this issue include:

1) New kid on the shack
by "JOSE V. GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
2) Siemens E-566 (Rainbow)
by "JOSE V. GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
3) Re: Manual for R-366
by John Poulton <jp@cs.unc.edu>
4) Re: APR-5AX
by Michael Hanz <AAFRadio@erols.com>
5) BC-474 DESIGN FLAW
by David Stinson <arc5@ix.netcom.com>
6) Re: BC-474 DESIGN FLAW
by Mike Feher <n4fs@monmouth.com>
7) Re: APR-5AX
by Mike Feher <n4fs@monmouth.com>
8) MITE Wanted
by "Dick Dillman" <ddillman@igc.org>
9) Re: MITE Wanted
by Mike Feher <n4fs@monmouth.com>
10) Synchronous clocks
by Roy Morgan <roy.morgan@nist.gov>
11) Re: Re HQ-120
by Chuck Swiger <cswiger@widomaker.com>
12) WANTED: HRO-5TA1 Junker
by JimWMiller@aol.com
13) Re: BC-474 DESIGN FLAW
by Al Klase <skywaves@bw.webex.net>

Message-Id: <3.0.5.32.20011001085624.007f3bd0@pop.ctv.es>
Date: Mon, 01 Oct 2001 08:56:24 +0200
To: Old Tube Radios <boatanchors@theporch.com>
From: "JOSE V. GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
Subject: New kid on the shack
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hello!

Last Saturday I bought a nice Hickok 600A tube tester. I must say that it was really unexpected for me to locate such an item locally (I live in Spain and here tube testers are really scarce)

It came without any accessory nor manual (luckily, roll chart is in top shape). I have found some scanned docs in the Web, but at least user's manual does not print out very nice; could somebody provide me with a better scan of it?. Of course, a paper copy would also be right.

After a careful cleaning (it had a yellowish panel), the tester panel looks really nice except for some wear in the SHORT switch zone and in the roll chart wheel area. Sockets are also good and calibration seems to be fine (although I plan to check this in detail)

Looking inside the tester, I found a 1952 dated 83 tube (perhaps an original?) along an undated 5Y3... I wonder if that setup was common to most Hickok testers, as it was used also on TV-7 series.

So now I have three tube testers: Triplett 3444, TV-7C/U (Canada made; similar electrically to an Stark TV-7/U and cosmetically to a TV-7B/U) and Hickok 600A. I think this last will be the mostly used, because its size is not as large as the 3444 and it gives direct Gm reading (I have always found the TV-7 reading somewhat scarce on information; yes, you can convert it to Gm, but it is not straightforward). But I must say that I still prefer the Triplett 3444 way, as it gives an average and minimum Gm figure, not just an average Gm as in the 600A.

Anyway, another nice set has found its way to my shack. And I am glad it did!

Regards,

JOSE

PS: I paid about $113 for the 600A, a close to mint Fluke/Philips PM6662 150MHz counter (dated 1990) and a box of about 50/60 mostly radio NIB tubes. I think it was a good deal!

----

73 EB5AGV / EC5AAU - JOSE V. GAVILA
La Canyada - Valencia (SPAIN)

EB5AGV Vintage Radio Site: http://www.geocities.com/eb5agv

European Boatanchors List: http://groups.yahoo.com/group/euro_ba_swap

----

Message-Id: <3.0.5.32.20011001091235.007fa800@pop.ctv.es>
Date: Mon, 01 Oct 2001 09:12:35 +0200
To: Old Tube Radios <boatanchors@theporch.com>
From: "JOSE V. GAVILA (EB5AGV/EC5AAU)" <eb5agv@ctv.es>
Subject: Siemens E-566 (Rainbow)
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"

Hello!

Last Saturday was an interesting day... just before I got a Hickok 600A tester, I visited a ham who gave me (yes, for free :-)!) a nice BA, a Siemens E-566 'Rainbow' receiver. It covers 14 - 21 kHz and 85 - 30300 kHz in 12 bands.

Now the not so good news: apart of a good cleaning, it needs a replacement power transformer (it is charred). Also, some of the wiring is badly cracked. There are also some missing tube covers.

Front panel seems good enough and there are just some band select buttons which are not in good shape. Dial is a bit discoloured, probably due to sunlight (as this reveiver was used in a ship along a 1kW transmitter, I was told). But, well, it is a real BA!

I was out of BA winter projects... now I have one :-) !

I need the service manual (or at least schematics) for this set. I would appreciate your help on this. Thanks!

Regards,

JOSE

----
  73 EB5AGV / EC5AAU - JOSE V. GAVILA
     La Canyada - Valencia (SPAIN)

  EB5AGV Vintage Radio Site: http://www.geocities.com/eb5agv

  European Boatanchors List: http://groups.yahoo.com/group/euro_ba_swap

----
Date: Mon, 1 Oct 2001 08:24:26 -0400 (EDT)
From: John Poulton <jp@cs.unc.edu>
To: Old Tube Radios <boatanchors@theporch.com>
cc: knjhanlon@qwest.net, Old Tube Radios <boatanchors@theporch.com>
Subject: Re: Manual for R-366
Message-ID: <Pine.GSO.4.10.10110010822310.15037-100000@capefear.cs.unc.edu>
MIME-Version: 1.0

Content-Type: TEXT/PLAIN; charset=US-ASCII

John, and Jim,

The manual's available from Sheldon Wheaton for $12 (I just ordered a copy), so there's no need to put ourselves through all this! Jim: thanks once again for your very kind offer; John: check your mail q; I sentcha Sheldon's address-- if you lost it, be happy to find it again for you.

73, John KF4OZY

John: you're not thinking of moving back to Alburquerque are ya?

On Sat, 29 Sep 2001, john wrote:

> Not sure whether you're writing to john poulton or john brewer (we're both
> in the same area, and we BOTH have R366's John!). In any event,
> we'd BOTH love to have a copy, and I'll assure you you'll get your manual back
> (and make John Poulton a copy to boot!)
> Best
> John
> PS: Is Sandia doing any hiring Jim?
>
> At 10:05 PM 9/28/01 -0600, James Hanlon wrote:
> >John,
> >
> >I have a manual for the R-366, or rather for "Radio receiving Set
> >AN/TRR-5." It's not small, perhaps 3/8" thick and printed on both sides
> >of the page. Perhaps I could send it to you, you could make copies and
> >then send it back to me?
> >
> >I also have one of the receivers. One of these days I plan to shake it
> >out and get it running.
> >
> >Jim, W8KGI
> >
> >
>

Message-ID: <3BB86046.D3450B93@erols.com>
Date: Mon, 01 Oct 2001 08:23:34 -0400
From: Michael Hanz <AAFRadio@erols.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: APR-5AX
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

> While digging through some of the stuff in the basement I came across an R91/APR-5AX. The only info I could find was by Chesson and he claims it takes two "plug-in" units to cover the entire range (1000 to around 6600 MHz.). The unit looks complete, and unmodified, yet I cannot seem to figure out how, or where a "plug-in" could be exchanged. Any one else has one of these beasts that can shed some light on it for me?

Simple case of semantics. The central 'module' in these sets is the local oscillator, and two modules were available - the CV-13/APR-5 (1000-3000MHz) and the CV-12/APR-6 (3000-6130MHz). Changeover between the two modules requires removal of the chassis from its cover and unplugging all the internal connectors, as well as removing a number af retaining screws, so it's something that requires a workbench, not normally done in flight. To complicate matters further, a kit was issued to modify a CV-13 to a CV-12.

These sets are one of those typical wartime anomalies. Lacking the sophistication of the APR-4 (the -5 had neither preselector, motor sweep drive, nor plug-in tuning units) the only thing going for it was cost and ease of production. It has a wide open front end with crystal detection, so sensitivity is poor and images abound. Analyses of flight logs were replete with mysterious radar frequencies well beyond those used by German and Japanese radars of the period, causing time consuming investigations of the geographic areas in question in case the enemy had deployed some new development. My impression is that it quickly became more of a ground and shipboard based surveillance receiver as opposed to airborne, since it was more suitable for looking for threats approaching you than searching for new signals in a fast moving airborne platform. Reinforcing this impression is the Navy development of the F-26/UPR preselector to mount next to it - typical shipboard construction - and it was badly needed to make it into a useful tool, given all the interfering signals present on a 1944 Navy combatant.

All of which brings up the confusing nomenclatures for this set. There were two basic models - the R-91/APR-5AX, which is the ground or shipboard model operating on 115vac 60~, and the R-98/APR-5AY, operating on 400~. If you inserted the CV-12, it became an APR-6. I have an R-111B/APR-5A here that has the oscillator module protruding from the front panel about 1" and is actually switchable between the two bands using the same knob as the BC-348 power switch, but its provenance is unclear. I seem to recall several other variations, but I don't have time to go through the documents at the moment.

Most likely more than anyone wanted to know anyway...

73,

Mike Hanz KC4TOS

Message-ID: <3BB866B3.3089C9B0@ix.netcom.com>
Date: Mon, 01 Oct 2001 07:50:59 -0500
From: David Stinson <arc5@ix.netcom.com>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
Subject: BC-474 DESIGN FLAW
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

To those who have a BC-474:
I'm not one to do mods, but this one is needed if you're going to use the BC-474 even a little. There is a can filter capacitor inside the BC-474 which filters the tranmit B+ line. This can is connected after the Transmit/Receive wafer switch. When you switch from receive to transmit, the surge current sparks at the wafer switch contacts and does damage. It will eat the contact up in short order.

Since any external supply you use will have plenty of filtering, either disconnect the filter cap completely or move its connection to the "hot" side of the wafer switch. I disconnected mine and it works fine.

Date: Mon, 01 Oct 2001 09:20:53 -0400
From: Mike Feher <n4fs@monmouth.com>
Subject: Re: BC-474 DESIGN FLAW
To: Old Tube Radios <boatanchors@theporch.com>
Message-id: <002e01c14a7b$e6b8fb40$20c5be18@n4fs>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1
Content-transfer-encoding: 7BIT

Good observation Dave. I left mine alone. While I have only used it on an infrequent basis, I have not found the arcing to cause any problems to date. I probably have not used it in 4 or 5 years, and I believe all of my operation on it was on AM. Initially, I too was leery, and had the same thoughts as you, but, then decided to leave it be. It is a fun set to use. I built a power supply that fits into the compartment for the receive battery. It has the proper jacks on the front to allow plugging in the transmit and receive power cords. It is a tight fit, but works real well. That reminds me, you asked for the serial numbers of the sets. I have almost 4 of them. 2

are complete and I will send you those numbers. I believe on of the other ones the plate has been removed and there is no cover, and, the last one does not have a case. The last one is interesting in that it is the typical RCA AV series gray color, and the receiver and transmitter are physically separated, but it is obvious they belong together. 73 - Mike

Mike B. Feher, N4FS
89 Arnold Blvd.
Howell NJ, 07731
(732) 901-9193

----- Original Message -----
From: "David Stinson" <arc5@ix.netcom.com>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Monday, October 01, 2001 8:50 AM
Subject: BC-474 DESIGN FLAW

>
>
> To those who have a BC-474:
> I'm not one to do mods, but this one is needed if you're going to use
> the
> BC-474 even a little. There is a can filter capacitor inside the BC-474
> which filters the tranmit B+ line. This can is connected after the
> Transmit/Receive wafer switch. When you switch from receive to
> transmit,
> the surge current sparks at the wafer switch contacts and does damage.
> It
> will eat the contact up in short order.
>
> Since any external supply you use will have plenty of filtering, either
> disconnect the filter cap completely or move its connection to the "hot"
> side of the wafer switch. I disconnected mine and it works fine.
>
>

Date: Mon, 01 Oct 2001 09:41:32 -0400
From: Mike Feher <n4fs@monmouth.com>
Subject: Re: APR-5AX
To: Old Tube Radios <boatanchors@theporch.com>
Message-id: <003901c14a7e$c974e320$20c5be18@n4fs>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1

Content-transfer-encoding: 7BIT

Mike -

Thanks for the information. I am not about to take the oscillator cavity assembly out, but as it is I do not see any separate nomenclature on it. Since the tuning knob has both scales on it above 1500 MHz, I assume the same dial was to be used with either oscillator assembly. The numbers on the dial are directly doubled, for the extended range. It must have been a real bear of a task to not only remove and exchange the oscillator, but to align the existing knob for the proper frequency range and tracking. Seems like a new knob assembly, that covered the appropriate range could just as easily been provided with the new oscillator assembly. I wonder how many were actually changed over. Ed Sharpe suggested that it worked using the second harmonic of the same oscillator, and, looking at the knob, it is a valid conclusion. Of course the injection level at the second harmonic would (or should) be greatly reduced, consequently reducing an already poor sensitivity. It is far from semantics, the term "plug-in" just does not apply, HI. 73 - Mike

Mike B. Feher, N4FS
89 Arnold Blvd.
Howell NJ, 07731
(732) 901-9193

----- Original Message -----
From: "Michael Hanz" <AAFRadio@erols.com>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Monday, October 01, 2001 8:23 AM
Subject: Re: APR-5AX

> > While digging through some of the stuff in the basement I came across an
> > R91/APR-5AX. The only
> > info I could find was by Chesson and he claims it takes two "plug-in"
units
> > to cover the entire range (1000 to around 6600 MHz.). The unit looks
> > complete, and unmodified, yet I cannot seem to figure out how, or where
a
> > "plug-in" could be exchanged. Any one else has one of these beasts that
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> > shed some light on it for me?
>
> Simple case of semantics. The central 'module' in these sets is the
> local oscillator, and two modules were available - the CV-13/APR-5

> (1000-3000MHz) and the CV-12/APR-6 (3000-6130MHz). Changeover between the two modules requires removal of the chassis from its cover and unplugging all the internal connectors, as well as removing a number af retaining screws, so it's something that requires a workbench, not normally done in flight.   To complicate matters further, a kit was issued to modify a CV-13 to a CV-12.
>
> These sets are one of those typical wartime anomalies. Lacking the sophistication of the APR-4 (the -5 had neither preselector, motor sweep drive, nor plug-in tuning units) the only thing going for it was cost and ease of production. It has a wide open front end with crystal detection, so sensitivity is poor and images abound. Analyses of flight logs were replete with mysterious radar frequencies well beyond those used by German and Japanese radars of the period, causing time consuming investigations of the geographic areas in question in case the enemy had deployed some new development. My impression is that it quickly became more of a ground and shipboard based surveillance receiver as opposed to airborne, since it was more suitable for looking for threats approaching you than searching for new signals in a fast moving airborne platform. Reinforcing this impression is the Navy development of the F-26/UPR preselector to mount next to it - typical shipboard construction - and it was badly needed to make it into a useful tool, given all the interfering signals present on a 1944 Navy combatant.
>
> All of which brings up the confusing nomenclatures for this set. There were two basic models - the R-91/APR-5AX, which is the ground or shipboard model operating on 115vac 60~, and the R-98/APR-5AY, operating on 400~. If you inserted the CV-12, it became an APR-6. I have an R-111B/APR-5A here that has the oscillator module protruding from the front panel about 1" and is actually switchable between the two bands using the same knob as the BC-348 power switch, but its provenance is unclear. I seem to recall several other variations, but I don't have time to go through the documents at the moment.
>
> Most likely more than anyone wanted to know anyway...
>
> 73,
> Mike Hanz KC4TOS
>
>

From: "Dick Dillman" <ddillman@igc.org>
To: Old Tube Radios <boatanchors@theporch.com>
Date: Mon, 1 Oct 2001 06:52:05 -0700
MIME-Version: 1.0
Content-type: text/plain; charset=US-ASCII
Content-transfer-encoding: 7BIT

Subject: MITE Wanted
Message-ID: <3BB81295.17676.19AACE@localhost>

This is another periodice request for information leading to a military MITE teletype machine, 28V model. All leads appreciated.

Regards,

Dick

Dick Dillman, W6AWO
Member of the Maritime Radio Historical Society
http://www.radiomarine.org
Collector of Heavy Metal:
Harleys, Willys and Radios over 100lbs.

Date: Mon, 01 Oct 2001 10:09:48 -0400
From: Mike Feher <n4fs@monmouth.com>
Subject: Re: MITE Wanted
To: Old Tube Radios <boatanchors@theporch.com>
Message-id: <005b01c14a82$bc154900$20c5be18@n4fs>
MIME-version: 1.0
Content-type: text/plain; charset=iso-8859-1
Content-transfer-encoding: 7BIT

Dick -

I have one of these but I believe it is a 115VAC unit. I will check. 73 - Mike

Mike B. Feher, N4FS
89 Arnold Blvd.
Howell NJ, 07731
(732) 901-9193

----- Original Message -----
From: "Dick Dillman" <ddillman@igc.org>
To: "Old Tube Radios" <boatanchors@theporch.com>
Sent: Monday, October 01, 2001 9:52 AM
Subject: MITE Wanted

>
> This is another periodice request for information leading to a military MITE teletype machine, 28V model. All leads appreciated.
>
> Regards,
>
> Dick
>
>
> Dick Dillman, W6AWO
> Member of the Maritime Radio Historical Society
> http://www.radiomarine.org
> Collector of Heavy Metal:
> Harleys, Willys and Radios over 100lbs.
>
>

Message-Id: <5.0.0.25.2.20011001103643.00aca740@sdct-sunsrv1.ncsl.nist.gov>
Date: Mon, 01 Oct 2001 11:35:41 -0400
To: Old Tube Radios <boatanchors@theporch.com>
From: Roy Morgan <roy.morgan@nist.gov>
Subject: Synchronous clocks
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 02:43 PM 9/29/01 -0500, "Bill Hawkins" wrote:

>Had a chance to tour a 2,500 MW coal-fired power plant last week. It reminded me of something that's been a mystery to me for 50 years. How do the electric clocks that are locked to the power line frequency stay accurate to a few seconds year after year? ...A search of the net comes up dry.

Hello from NIST
(I work at the main campus near DC, not at Boulder where WWV is located):

I can only assume that the power stations now have satellite receivers. See: www.time.gov which is the common name for a server at NIST for a nice public-oriented tour of the history and current technology of time. To quote from that site, and specifically from: <http://physics.nist.gov/GenInt/Time/boulder.html>

"Since 1975 NIST time and frequency signals have been relayed to most of the Western Hemisphere by satellites positioned high above the equator. The two GOES weather satellites operated by the National Oceanic and Atmospheric Administration broadcast a time code near 468 MHz that can set suitable clocks to within 100 microseconds (millionths of a second) of UTC time. "

A more detailed and technical resource here is:
<http://www.bldrdoc.gov/timefreq/>
This is the web site of the Time and Frequency Division of the NIST Physics Laboratory at Boulder.
(NOTE: Here you can take the time services survey to tell the NIST staff how you may use the services they provide:
<http://timesurvey.nist.gov/>)

>As I understand it, NIST and the "clock" in Boulder provide the
>national standard *frequency* with incredible precision, ...It is the US Naval
>Observatory that provides the US standard for Time of Day. I don't
>know how that value of time gets to WWV.

Generally, NIST provides civilian and scientific time services, and the USNO serves military users.

"UTC" is not an acronym as is the case with many names in the world of standards, but is a compromise among many acronyms proposed for (in English): Coordinated Universal Time. It is the "Coordinated" part of this that you are wondering about.   At least at one time, especially built portable cesium clocks were compared with each national standard laboratory's master clock (or clock set) and actually carried from one country to another. Again, comparisons were made. Once the clock was carried back to the place it started from, and MORE comparisons made, then the folks could determine what error existed. These methods may still be used, but satellite systems are in use also.

>   It would seem that there is no need for WWV to talk to USNO
>except to hear about the forthcoming addition of a leap second.

Not exactly. Continuing comparisons are needed to make sure that all standard clocks are in sync and that the needed degrees of accuracy are maintained and improved. For instances at the Time Scale web page listed below, we can read:
"The deviation of UTC(NIST) from UTC has been less than +/-100 ns since July 6, 1994."

>The leap second is added at a fixed time, so all you have to do
>is turn on the Leap Second switch before that time and it all
>happens automatically.

The history of Leap Seconds and further information about NIST Time scales is at:
<http://www.boulder.nist.gov/timefreq/pubs/bulletin/timescaleindex.htm>

>The USNO Time service "tycho" has a search engine, but it cannot
>find any mention of synchronizing line frequency clocks. At least,
>not with the words I tried. So maybe this is one of those rare
>fields of technology that has not found its way to the net.

With some digging, I fond summary information about comparisons at:
<http://www.boulder.nist.gov/timefreq/time/carrierphase.htm>
"   Although most GPS receivers use the time codes that are transmitted by the satellites for both position determination and for time transfer, it is also possible to use the carrier itself for similar purposes.

We have conducted a number of tests of this technique, including short-baseline experiments at NIST, longer-baseline tests between NIST in Colorado and the US Naval Observatory in Washington, DC, and a very-long baseline test between NIST and the Physikalisch Technische Bundesanstalt (PTB) in Braunschweig, Germany. The latter experiment is particularly significant, since it can provide a direct comparison between the primary frequency standards located at NIST and PTB.

Our results to date show that the method is capable of providing frequency comparisons with a fractional uncertainty of about 2 x 10-15 using one day of averaging."

I suspect you will find further information at:
<http://www.boulder.nist.gov/timefreq/general/publications.htm>
"The NIST Time and Frequency Division maintains a database of over 1500 time and frequency related publications authored by NIST personnel dating back to 1958. Currently, 363 of these publications are available online as PDF files..."

I would start with:
Time and Frequency Measurements using the Global Positioning System (GPS)
(published at the 2001 Measurement Science Conference)
<http://www.boulder.nist.gov/timefreq/general/pdf/1417.pdf>

Categories of things you can read are:

WWVB Improvements: New Power from an Old Timer
Computer Time Synchronization
Introduction to Frequency Calibrations
Time and Frequency Measurements using the Global Positioning System (GPS)
Traceability in Time and Frequency Metrology
Characterization of Clocks and Oscillators
Selected General Publications from Ion Storage Group
Selected Publications on Ion Frequency Standards
Selected Publications on Optical Frequency Measurements and Standards
Selected Publications on Penning Traps and Non-Neutral Plasmas
Selected Publications on Quantum Logic and Coherent Control

The one called "Characterization of Clocks and Oscillators" includes in its

preface:
"This is a collection of published Papers assembled as a reference for those involved in characterizing and specifying high-performance clocks and oscillators. ..."

In the Ion Frequency Standards group we find papers about research now going on to improve our current systems:
""High-accuracy microwave and optical frequency standards in cryogenic linear ion traps," in Proc. Workshop on the Scientific Applications of Clocks in Space, November 7-8, 1996"
and:
""Direct comparison between two cold-atom-based optical frequency standards using a femtosecond-laser comb," Opt. Lett. 26, 102-104 (2001)."

NIST now has in operation a clock "NIST-F1 ... with an uncertainty of 1.7 parts in 10 to the 15th power, or accuracy to about one second in 20 million years, making it the most accurate clock ever made (a distinction shared with a similar standard in Paris)."

If you need less stringent accuracy, you can
Set Your Computer Clock Via the Internet NIST Internet Time Service (ITS):
<http://www.boulder.nist.gov/timefreq/service/its.htm>

Happy reading.. It's about time for lunch.

Roy

- Roy Morgan
National Institute of Standards and Technology
100 Bureau Drive, Stop 8970
Gaithersburg MD 20899-8970
Voice: 301-975-3254 Fax: 301-948-6213
E-mail: roy.morgan@nist.gov --

Message-Id: <4.3.1.1.20011001134844.00d8fca0@192.168.0.134>
Date: Mon, 01 Oct 2001 14:52:44 -0400
To: Old Tube Radios <boatanchors@theporch.com>
From: Chuck Swiger <cswiger@widomaker.com>
Subject: Re: Re HQ-120
Mime-Version: 1.0
Content-Type: text/plain; charset="us-ascii"; format=flowed

At 06:42 PM 9/29/01 -0400, K4JRB wrote:

>The HQ 120 was based upon a Hazeltine patent as were many of the old console
>radios of the 1930's and 40'S.   There were a number of radio designs based
>on the superhet hazeltine design. Someone told me the design was co-held by

>RCA altho if true the AR-88 was the only receiver RCA sold based on the

Dave mentions the Hazeltine patent which got me interested in something.
That sounded familiar so I checked the name plate on top of the HQ-120
tuner which I recall has a long list of patents - there must be over 45 numbers
listed in the Hazeltine section. Anyway, find an online patent database like

http://patft.uspto.gov/netahtml/srchnum.htm

and plug in one of the numbers, like 1535189 and voila, it's available
online, albeit
TIFF images only. Fetching the TIFF image viewer plug in 15 day demo with
a made up
identity to avoid spam shows some really nice images that download fast.
For instance,
patent 1572504 is a condensor, you get 4 pages of drawings and text. Here's
one claim:

"1. An electrostatic condenser having one side in the form for a stator and
its comple-
mental side in the form of a rotor, in combination with a cast metal frame
having a
sleeve element cast integrally with one side of the frame; a sleeve element
assembled
with the opposite side of the frame; bearings assembled with the said
sleeve ele-
ments, the rotor being mounted in said bearings that are positioned to
enable the rotor
to turn in the space surrounded by the frame; and a mounting of insulation
assembled with the frame and carrying the stator in register with said space."

And you thought Faraday invented the condensor. The above was filed Oct.
22, 1924.
Some of the other patent numbers might be more specific to the HQ-120/AR-88.
Anyway there's another research tool into radio history, some more info to
browse.
There may be some way to just download the images and view with a free TIFF
viewer
but I can't find it right off.

Chuck
kb4new
cswiger@widomaker.com

Date: Mon, 01 Oct 2001 17:39:29 EDT
From: JimWMiller@aol.com
Subject: WANTED: HRO-5TA1 Junker
To: Old Tube Radios <boatanchors@theporch.com>
Mime-Version: 1.0
Content-Type: text/plain; charset=ISO-8859-1
Content-Transfer-Encoding: 7bit
Message-ID: <f6.101c2133.28ea3c96@aol.com>

Hi Folks,
I would like to buy a National HRO-5TA1 Junker for parts with or without coils so please let me know if you have one to spare. Thanks in advance.
73, Jim Miller, WA2UMP

Message-ID: <3BB96B90.5BB90A93@bw.webex.net>
Date: Tue, 02 Oct 2001 00:24:00 -0700
From: Al Klase <skywaves@bw.webex.net>
MIME-Version: 1.0
To: Old Tube Radios <boatanchors@theporch.com>
CC: Old Tube Radios <boatanchors@theporch.com>
Subject: Re: BC-474 DESIGN FLAW
Content-Type: text/plain; charset=us-ascii
Content-Transfer-Encoding: 7bit

Mike Feher wrote:
> ..... The last one is interesting in that it is the typical
> RCA AV series gray color, and the receiver and transmitter are physically
> separated, but it is obvious they belong together. 73 - Mike

Mike,

I think you'll find that the sets in the grey cases with split front panels (Separate TX & RX)we're the batch of sets RCA originally manufactured for Sweden. They bore the RCA part number "MI 8751" on a tag on top. These were diverted to the Signal Corps as the war clouds gathered. Mine has RCA "meat balls" silk screened on the front.

BTW, anyone have a working RF ammeter for one of these sets?

73,
Al

--
Al Klase - N3FRQ

skywaves@bw.webex.net
Flemington, NJ 08822
Web Page: http://www.webex.net/~skywaves/home.htm

End of BOATANCHORS Digest 3229
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